

Although coal accounted for less than half the US' electricity generation in 2011, it produced almost 80% of the greenhouse gas CO2.

Another study <http://www.eia.gov/tools/faqs/faq.cfm?id=73&t=11> also depicts coal's energy-inefficiency, comparing the amount of CO2 (in pounds) emitted per million BTU of energy produced:

Coal (anthracite)	227
Coal (bituminous)	205
Coal (lignite)	215
Coal (subbituminous)	213
Diesel fuel & heating oil	161
Gasoline	156
Propane	139
Natural gas	117

Coal is burned to produce electricity because it is abundant and because it appears to be cheap. But it is not cheap. A common cost for energy produced from conventional coal, \$100 per MWh, is often used to compare coal with alternative energy sources. However, this figure is only part of the true cost of burning coal for electricity. In a recent study by the New York Academy of Sciences, "Full cost accounting for the life cycle of coal,"

http://solar.gwu.edu/index_files/Resources_files/epstein_full%20cost%20of%20coal.pdf, Epstein and others studied the costs of coal and estimated **coal's externalities to be between \$90 and \$270 per MWh in addition to the stated cost**. In other words, adding in the externalities would at least double the actual cost of coal and put it out of the running in the energy mix.

Our world is moving away from coal; it would do so faster if coal's true costs to health, economic vitality, and the environment were recognized in the pricing structure. As natural gas becomes more prevalent and cheaper, and as coal's true costs are understood, US coal plants are shutting down rapidly, 241 of 1400 units or 36,000 MW of 300,000 MW in the next 5 years.

<http://www.americaspower.org/sites/default/files/Coal-Unit-Retirements-Sept-20-2012.pdf>

The negative trend for coal-fired plants in the US severely impacts Peabody and other domestic mining operations, so they are turning to export. China with its lax environmental controls represents the US coal industry's sole bright opportunity and Whatcom County has the misfortune to stand in the middle, between the mines of Wyoming and the power plants of Asia.

Environmental studies requested:

Direct: Please determine the impact on the health of Whatcom County residents and on the quality

of our environment of the increased transport of 13.5 miles of coal trains per day through our city and along our waterfront to the proposed shipping terminal. Include direct impacts on our air, water, and ground quality caused by moving the coal via rail and freighter ship through our area. Include the impacts caused by unforeseen incidents such as train collisions, derailments, accidents at the GPT, and accidents on the freighters. The cost externalities identified in the New York Academy of Sciences study cited above can serve as a checklist of potential impacts.

Indirect: Indirectly, Whatcom county will be impacted by distant burning of the additional coal shipped from the GPT. Please determine the impact on the quality of the Earth's air and water and the effect of these changes on the health and wellbeing of Whatcom County residents.

Cumulative: Additional burning of coal will contribute significantly to the world's greenhouse gas load in the atmosphere. Please determine how the acceleration of global warming, climate change, and sea level rise will affect Whatcom County.

Alternatives to be considered:

- Using different rail lines to the proposed terminal as a possible means of reducing the direct impact of trains carrying coal on air and water along the Bellingham waterfront.
- Not shipping coal from the GPT as a means of eliminating the direct risks of environmental damage caused by coal transportation and unforeseen incidents as well as to reduce the indirect and cumulative impacts of coal burning.